

### **REMARKS**

This is in response to the Office Action mailed on January 23, 2004, and the references cited therewith. Claim 7 is amended. No claims are canceled or added; as a result, claims 1-20 remain pending in this application.

The amendments to the claims are fully supported by the specification as originally filed, and no new matter has been added. The amendments are made to clarify the claims and are not intended to limit the scope of equivalents to which any claim element may be entitled. Applicant respectfully requests reconsideration of the above-identified application in view of the amendments above and the remarks that follow.

#### **§102 Rejection of the Claims**

Claims 6 and 7 were rejected under 35 USC § 102(b) as being clearly anticipated by Kumar, et al. "Extended Hypercube: A Hierarchical Interconnection Network of Hypercubes".

Anticipation requires the disclosure in a single prior art reference of each element of the claim under consideration. The Applicant respectfully submits that the Office Action did not make out a *prima facie* case of anticipation.

First, independent claim 6 recites "a first set of routers for interconnecting the plurality of processors as two-dimensional hypercubes. . ." The Office Action suggests that Figure 3 of Kumar shows the plurality of processors as nodes 0000. . .0004 which is the lowest level of Figure 3. The Office Action also suggests that Figure 3 of Kumar shows the first set routers for interconnecting the plurality of processors as two-dimensional hypercubes as nodes 0 and 00-04, which are at the top level and the second level of Figure 3. However, nodes 0 and 00-04 do not interconnect the processors at the lowest level as two-dimensional hypercubes. Thus, Office Action does not make out a *prima facie* case of anticipation because Figure 3 of Kumar does not teach each and every element of element of claim 6.

Second, independent claim 7 as amended recites "wherein if one of the routers in the second set of routers is coupled to one of the routers in the first set of routers, then the one of the routers in the second set of routers is also coupled to less than less than two other routers in the second set of routers, otherwise the one of the routers in the second set of routers is coupled to

less than three routers in the second set of routers.” The interconnection network shown in Kumar does not teach or show this element.

Thus, the Kumar reference does not teach each and every element of element of claims 6 and 7. Reconsideration and allowance of claim 6 and 7 is respectfully requested.

§103 Rejection of the Claims

Claims 8-20 were rejected under 35 USC § 103(a) as being unpatentable Kumar et al.. “Extended Hypercube: A Heirarchical Interconnection Network of Hypercubes”. Applicant respectfully traverses the single reference rejection under 35 U.S.C. § 103 since not all of the recited elements of the claims are found in Kumar. Furthermore, claims 8-20 depend directly on claim 7 and are patentable over Kumar for the reasons argued above, plus the elements in the claims.

Conclusion

Applicant respectfully submits that the claims are in condition for allowance, and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney at (612) 349-9592 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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By their Representatives,

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Date July 23, 2004

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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: MS Amendment, Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 23rd day of July, 2004.

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